

6  
CLAIMS

What is claimed is:

1. A sampling instrument comprising:  
a first housing comprising a needle arranged for protrusion therefrom, said needle being adapted to draw therethrough a fluid;  
a reagent disposed in said first housing in fluid communication with said needle, capable of producing an optically-sensible reaction with a fluid; and  
an optical sensor disposed in said first housing adapted to sense said optically-sensible reaction.
2. The sampling instrument according to claim 1, further comprising a processor in communication with said optical sensor adapted to process a signal from said optical sensor, said signal being a function of said optically-sensible reaction.
3. The sampling instrument according to claim 2, wherein said processor is in communication with said optical sensor by means of an optical waveguide.
4. The sampling instrument according to claim 2, wherein said processor is disposed in a second housing, said first and second housings comprising mating connectors to effect the communication between said processor and said optical sensor.
5. The sampling instrument according to claim 1, wherein said first housing is disposable.
6. The sampling instrument according to claim 2, further comprising a fluid pump in fluid communication with said needle adapted to pump a biological fluid through said needle.
7. The sampling instrument according to claim 4, further comprising a fluid pump in fluid communication with said needle adapted to pump a biological fluid through said needle, wherein said fluid pump is disposed in said second housing.
8. The sampling instrument according to claim 1, wherein said first housing further comprises a waste receptacle for storing therein at least one of waste products of said optically-sensible reaction and destructive fluids for neutralizing substances.
9. The sampling instrument according to claim 1, wherein said needle is retractable into said first housing.
10. The sampling instrument according to claim 2, further comprising a display in communication with said processor.
11. The sampling instrument according to claim 2, wherein said processor comprises a photodiode and a microprocessor.

12. The sampling instrument according to claim 1, further comprising at least one of a transmitter and a receiver for wireless communication with an external device.
13. The sampling instrument according to claim 4, wherein said first and second housings together form an elongate housing.
14. The sampling instrument according to claim 4, wherein said second housing is reusable.